A Study on the Elementary School Curriculum

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A STUDY ON THE ELEMENTARY SCHOOL CURRICULUM.

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(I)

Outline.

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2. Historical sketch of elementary instruction.
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4. Natural methods and development work.
5. Particular subjects.
6. Correlation and general culture.

References.

Reports of the Committee of Ten, given in the Educational Review, 1894.

Report of the Committee of Fifteen, Educational Review, March 1895.

Pedagogics of the Kindergarten, Froebel.

Methods in the schools of Germany, Prince.

European Schools, Klemm.

Education in the United States, Boone.

The True Order of Studies, Rev. Thomas Hill.

History of Education, Painter.

Education of the Greek People, Davidson.

Compayre's History of Education, Payne.

History and Science of Education, Shoup.

Philosophy of Education, Rosenkranz.

Symbolic Education, Blow .

Émile, Rousseau.

Childrens Rights, Kate Douglas Wiggin.

Physiology and Hygiene, Huxley and Youmans.

Combe's Physiology, Chapter on Nerve System and Mental Faculties.

Notes on Sanitary Science.

Note books used in method study of various subjects.

The subject of school curriculums is one which has been, and is still attracting a great deal of attention and discussion. It will no doubt be many years, if ever, before it ceases to be a magnet to draw unto itself the thought and study of many of the leading educators of the country. Indeed, school curriculums must be forever changing and advancing to correspond with the progress of civilization and so must continue to form a nucleus around which the interest of many will center.

Formerly more attention was paid to the curriculums of higher schools than to those of the elementary ones, the latter being deemed the less important. The Committee of Ten whose appointment grew out of an action taken in the National Council of Education in regard to the uniformity in school programs and in the requirements for admission to college, found that they could not treat the subject satisfactorily without asking for an improvement in elementary school programs. As a result of this, the Committee of Fifteen were appointed to give their especial attention to elementary work. Thus we see that educators are learning that the curriculums of the higher schools can never approach perfection until

those of the lower ones are brought to the same degree of completeness. The lower must serve as a foundation for the higher. President J. G. Schurman of Cornell University says that the requirements for entrance to colleges should be the best that pupils can get in high schools. If this principle could be followed out in all departments of school work we should build as we ought to, from the foundation up, and our elementary schools would be justly deemed the most important.

Before taking up the study of elementary school curriculums as they are and as they should be, it is well to look back and see what they have been in the past. We find records of a University founded in Thebes, at that time capital of Egypt, as early as the 14th century B. C. but this school was for the wealthy and cannot properly be classed among elementary schools. The people of Egypt were ruled by caste distinctions and so we find that their chief education consisted in learning the manual occupations of the castes to which they respectively belonged. Youth, destined for business, were taught reading, writing and arithmetic while priests and warriors received still higher education.

In China we find that reading and writing constituted in early times and still form the chief education of the people. One reason for this is the great difficulty encountered in mastering

the alphabet. Moreover, the Chinese are not progressive but beleive that whatever was good enough for their ancestors should not be improved upon in the slightest degree. The learning is entirely by rote and so not calculated to awaken any great desire for more of it.

In India we find an elaborate system of castes classified in this wise; the Brahmans or priests form the highest caste and are supposed to come from the head of Brahma, the Kshatriyas or soldiers and nobles, from the chest of Brahma, the Vaisyas or farmers and traders, and finally the Sudras or servants who come from the feet of Brahma. Besides these castes there are the pariah or outcasts who do not come from Brahma at all. Only the three higher castes received any education and among these it was restricted to the male sex. We are told that schools were usually held in the open air and that children learned to write by tracing the letters in the sand. Imagine one of these open air schools, a group of boys, from seven years old up, gathered on the sand under the shade of some tree perhaps and repeating after the master whatever lesson he is trying to teach them or with a pointed stick tracing letters in the sand. There is another view also which may be taken of the school; we may find the master if he is indolent asleep and the boys passing the hours as best they may, until it

is time to go home. Little real progress was ever made in this way, a little reading and writing with perhaps a very little arithmetic being all that was ever learned.

Glancing over the history of Persia and of the Jews we find education among the Persians to have been chiefly physical and among the Jews, chiefly religious. Looking next at the history of Greece, we find that the people were inspired mainly by a love of the beautiful and that music, poetry and a cultivation of physical beauty occupied a large share of their attention. The Athenians gave their children the additional advantage of the rudiments of an intellectual education, but the Spartans were a race of warriors and trained their children mainly to physical endurance, strength and cunning, even encouraging them to steal but punishing them severely if they were so stupid as to be detected in the act. Roman education differed from Grecian very materially in that the Romans cared not about the element of beauty but considered every thing from a practical standpoint.

Later came the Christian element to overthrow the old pagan learning and to substitute the doctrines of Christianity. Succeeding this came the long darkness of the Middle Ages when everything in the way of even rudimentary learning seemed swallowed up and lost. Two monarchs, Charlemagne in France and Alfred the Great

in England, did what little they could to illumine the darkness. At last came the Renaisance to put an end to this tedious time of superstition, mysticism and general ignorance. By some one the Middle Ages have been called a period of rest and preparation, like that which plants have in winter before their buds burst forth into the flowers and fruit of spring and summer. Growing up with this revival of the old elements of learning we find another, science, making its way and in time claiming its fair share of attention. Of course it took many years to establish regular schools and courses of instruction and especially to bring even elementary education within reach of the common people.

Instead of pursuing the history of education in the Old World up to the present time let us transfer our attention to the New World and note its progress here. Boone says that before the Revolution there were almost no text books except the Bible and the Catechism. Consequently, although schools were established and even girls were given some opportunities for learning, education could consist of little aside from reading, writing and religious training. After the Revolution came a rapid multiplication of text books of all kinds and education has since made great progress. Comparing our schools of to-day with those of the early ages we find that they have gone from one extreme to the other.

Whereas then, even the highest schools confined themselves to very few subjects, reading and writing occupying the major part of the time, now we find the elements of most of the sciences, in addition to reading, writing and language, taught in our primary schools. Music, drawing and in some cases foreign languages are also taught in the elementary grades. It is sometimes a question whether from curriculums which were to meagre or from no curriculums at all we have not gone to the other extreme and crowded too much into the early years of study of the children of to-day. A few other changes are distinctly noticeable. Learning was once altogether by rote, now that is given up and natural methods are being used, methods by which the children must understand before they memorize. Formerly children had to work and worry in order to memorize the alphabet before they could learn to read and then the words meant nothing to them. Now they are taught things first, then the words, and by the use of phonetic spelling we are obviating the memorizing of an alphabet at all. At one time formal grammar was made much of, now simpler language lessons are taking its place in the elementary grades at least. Education was once restricted to boys, now it is free to girls and boys alike. Thus we see that the changes have been many and great and we have to deal now with a very complex system of studies, even for children.

One of the first things which we should consider in the study of elementary work is the amount of time required from children for school duties and whether this is more or less than they ought to give to their studies. According to sanitary science the theoretical proportionment of time for an adult is eight hours for work, eight hours for sleep and eight hours for meals, exercise and recreation. This seems to be the result of a consideration of the needs of the average person from a physiological, as well as from a sociological, standpoint. Very few dispute the advisability or the necessity of the eight hours allowed for sleep but some claim that the eight hours allowed for work may be increased without detriment. Perhaps it may be in some cases but the work of many is indoors and physiologists say that in order to maintain a condition of health every person should spend about two hours daily in the open air. When we have allowed a suitable length of time for meals we find there is none too much left for reading and recreation. Mental work is not only work indoors, to a great extent, but it is work which affects especially the nervous strength. This makes it very essential that students have plenty of outdoor exercise and, by means of this exercise of a different set of tissues, aid sleep in resting and refreshing their nervous systems. Neglect of this is sure to injure the general health in some degree

The work of most colleges is planned in accordance with the above principles, allowing about three hours for recitation and six for study.

Taking theabove as a fair estimate of the amount of time an adult can profitably devote to study, what amount ought to be required from children for the same purpose? One estimate, taken from notes on hygienic methods of study, states that at no growing age ought a pupil to do over six hours work, study and recitation combined, that below the age of twelve no child should be asked for over four hours work and that below the age of ten no child should be required to do over two and one half to three hours work. A study of children shows that although they are constantly busy they cannot stand prolonged effort of any one kind. They need constant rest and change. Both body and mind are relatively weak and until they attain their maturity their strength must nearly all go to growth. Both need exercise but both will be injured if exercised to the extent of exhaustion. The two are so interdependent that too great a strain put upon one is very apt to affect the other.

In every person there are three general elements, the physical, the intellectual and the will. Although these elements are apparent at nearly the same time and to a certain extent are all developed together, yet the physical must predominate in childhood.

and to sacrifice this to any extent is like building a house from the roof downward. It is child nature to want but little of a thing at a time but to want that little often if it is at all agreable. In the course of intellectual growth the reasoning power is one of the last powers of the mind to be developed, the first knowledge must come through the senses. Before the child is able to reason very much he must have acquired a large stock of percepts and concepts. This is another reason for not confining his attention too closely to books but fortraining his powers of observation and giving him much time to use them in the world around him. The child will thus learn far more out of school than he can in it and he will learn far more in it if he goes there fresh and interested and is not kept long enough to become tired and disgusted. When the mind is interested it eagerly seizes upon that which is given it and assimilates it but, if it be sated, to force more upon it will only confuse what is there. Crowding and forcing a dull child does not make him brighter. His mind is like a weak body, it needs to be fed and exercised little by little until it gains the strength to take large measures of both. When we consider all these questions it hardly seems that the estimates previously given of the amount of work which should be required from children are too small but rather that they are as large as they ought to be if children are to be developed harmoniously as

regards both body and soul.

In most country schools the hours are too long, resulting in the fact that the children become tired both mentally and physically. It is a practical waste of time to teach a tired child for by the time he has made the effort necessary to pay apparent attention he has exhausted his powers and can do little good with the subject itself. If he does succeed in fixing his mind on the work in hand he is so tired that he spends a great amount of time and effort on a task which he would accomplish with far less, were he fresh and interested. City schools have done far more towards rationalizing the hours, though there is still room for improvement.

Confinement to one position or to one subject long at a time is contrary to all the natural impulses of the normal child. Therefore, not only should the number of hours in school be small but the length of each recitation should be short. It does not seem feasible to have a recess period more than once in the fore - noon or in the afternoon, whichever it may be, but it is practible to take a few minutes each hour and give the children gymnastics, marching or exercise of some kind. It would be well to vary the exercises and thus give additional pleasure to this recreation time. It will not be time lost because the children will be the fresher and brighter for it.

Having discussed some what the question as to how much time should be given by the child to study, we come next to a very important point and that is when and where shall he begin. Froebel, who has carefully studied children and child life, says that helplessness and personal will become very early the two hinges, the opposite poles or turning points of the childs life, the balance point of which is independent activity. Upon this principle he bases his whole system of kindergarten work. Froebel, therefore, presents a ball to the child as a first gift because it expresses stability and yet movability. He says that the hands, either one or both, are naturally fitted for grasping the ball and that the first movement on the part of the child shall be to grasp it and that later, as the child becomes able, other movements shall be tried. Indeed the ball is made the basis of an innumerable number of plays, games and songs. Froebel teaches the child through it something of the unity and manifoldness of nature. The ball is made the type of everything, as the sphere in one way or another is really the germ of all life. From this first gift Froebel proceeds to other gifts, all very carefully arranged and each one basedon the precedingone.

Although the child learns very little in the kindergarten which directly concerns his later studies his activities are all aroused, he learns to observe and compare, he learns neatness,

accuracy, a little of number, something of form, color and various other things, all of which unite in making a good foundation for his future study. And yet none of this has been work to the child, only one long delightful play in which he is very much interested. The true kindergarten never forces a child to do any thing, only guides his activities and provides something upon which they may exert themselves. Kindergartens, however, are not yet a part of our public school system although they are fast being introduced into the cities and may in time form the beginning point and a most fitting one of all elementary education . Kate Douglas Wiggin in her book on "Childrens Rights" asks whether if the state accepts the responsibility of educating the child after he has reached an arbitrary age it ought not rather to begin to educate him when he needs education, that he does need it before the age of six is becoming apparent to all. One prominent educator has said:""Give me the training of the first six years of a childs life and I care not who has charge of the remainder".

After the child leaves the kindergarten must come his introduction to school proper or if he has not attended a kindergarten, his first introduction to school. How ought the work to be begun here? Comenius says:"Instruction is easy in proportion as it follows the course of nature." The natural method is to investigate a subject when it is needed because when we see a necessity for

anything we are at once interested in obtaining it. We may need it for its usefulness or we may need it simply for our own pleasure but it becomes a want which we are interested in satisfying. How are we going to create this want in the child, how get him interested? We can begin without the interest by telling him: "You must do this thing", or, "You must learn that". Probably if we use force enough and use it long enough we will attain our end but the child sees no reason for it, his mind is occupied in rebelling or he works just to get through and be released from his task when he proceeds to forget it as soon as possible and think of something pleasant. Most children have not the strength of mind requisite to devote themselves to disagreable tasks continually and gain any great profit from them but will make their best progress along the lines that seem easy and interesting because there they are free and willing agents not slaves driven by a master. This interest may be aroused in various ways. One way taken by a teacher when her class first appeared was this. She had provided a set of platform scales. Of course the children on the alert to see what they could noticed it at once. Most of them had heard statements made as to the weight of various articles and perhaps some of them had been weighed. On being questioned regarding scales and weights much interest was displayed. Every child was eager to be weighed and so every child was weighed and the number

representing each childs weight was written on the blackboard oppo site his name. This gave each child a reason for wanting to learn to read, at least enough to read his own name and weight. Proceeding this way the children were soon interested not only in learning to read but also in learning to write and all because something familiar was made the connecting link between them and the lessons they were desired to learn. Of course this interest once aroused needs to be stimulated by constantly presenting familiar things in new ways in order that it may not flag.

One bright teacher is now trying the experiment with a first grade class of giving the children just what they wish and as long as they wish. For instance, one morning she provides a bowl of flowers of some simple kind. The children notice them and it takes very little to inspire them with a desire to learn about flowers. Then she teaches them simple facts in botany until they tire of that and want something else. Perhaps they may desire to study botany during the whole of the days session, if so, they study it and even the next day if they desire. Perhaps one day it may be zoology, learning the simple facts about some familiar animal like the cat. Another day it is some bright easy stories and they wish to read. As long as the interest lasts they study reading, discussing what they read. It may be that at the end of the year these children will not know as much along the stereotyped lines as if taught in the regular way but the sum total of their knowl-

edge will be greater because they will have wasted no time over uncongenial tasks. They will probably have learned something of reading, writing and number, they will also have begun a number of other studies, such as botany, zoology and geography. These will have all been madeinteresting so far and they will be ready to take them up more in detail in the later grades.

These first lessons in botany, zoology, geography and such subjects must of necessity be simple oral lessons but the same method may be used in presenting them when the children are prepared to take them up in a systematic manner. The interest we have in any subject depends upon the number of things we can relate to it. If a subject be presented to children as something which has no relation to anything they know, to learn about it seems something formidable but if on the contrary they see it as closely related to something with which they are already familiar it seems like an old friend under a new guise. Some interest in a subject is thus gained by the method of its presentation and this is increased in many cases by the inherent interest of the subject itself. Botany, for example, has a great deal of inherent interest as have most of the natural sciences. Grammar has almost no inherent interest and needs every advantage it can obtain from the method of its presentation. There is another factor which goes far towards arousing and holding interest in a subject and

that is the manner of the teacher. Some teachers naturally inspire a love for any subject while others have just the reverse effect.

The old text books usually consisted of a scientific arrangement of the facts classified under any subject while in most cases such an arrangement is neither easy nor interesting for children. It is not always the facts which logically and scientifically come first that are the simplest to learn or that can be related to things with which children are already familiar. Modern text books are remedying this to a great extent. In the matter of grammar and arithmetic there is little choice about the points of beginning, there are certain fundamental facts which must be learned first, but in such studies as botany, zoology and geography there is hardly any book which can be followed literally. Every thing which can be illustrated should be illustrated, science work should only be taught to the extent that material can be obtained for illustration. Children need the concrete examples in most cases, even older people with all their experience often get an erroneous idea from pictures and descriptions, how much more will this be the case with children whose experience with the world of objects is much more limited. Besides it is quite easy to obtain all the material that can be used if one will only take a little trouble. In beginning botany the time of the year

should be considered and the point for beginning chosen with reference to that. For instance, if botany be begun in the fall it is easier and pleasanter for the children to begin with the study of leaves because fall flowers are usually very complex. On the contrary spring flowers are quite simple, many of them. In zoology the beginning point depends so mewhat on the locality and on the power to obtain preserved specimens. It is better not to begin with the most complex forms nor yet with the most simple because when the forms are so simple that they have no distinct parts they are harder to understand than more complex ones.

The words taught children in learning to read should be illustrated as far as possible, it takes a little more time to illustrate at first but it will be time saved in the end because the words will be remembered so much better. Denominate numbers are considered a very dry part of arithmetic and they are not only dry but the tables are hard to remember. In some schools they are taught by means of the actual measures used commercially. Children have a chance to measure feet and yards, to prove experimentally that there are sixteen ounces in a pound and two pints in a quart. Teachers say they have to restrain the enthusiasm and interest in such cases rather than to stimulate them.

New subjects or new divisions of a subject need to be developed carefully. If a first lesson be simply assigned by the

teacher without any previous development wrong impressions are gained from the book often which take much time to eradicate. Not only is this the case but the subject may seem so difficult as to discourage the child when it is really quite easy if only rightly presented. There are many people who do not appreciate development work and who think it is a waste of time, a great fuss made over nothing. This is due partly to the wrong use of it, like everything else there is a wrong and a right way to use it. Used as a starting point in new subjects or divisions of subjects, it is invaluable but to make every lesson a development lesson is simply to abuse the method. The drill which must follow the development is quite as valuable and should occupy the larger part of the time. There are methods and devices, however, by which drill work may be made interesting. Development work cannot be hurried but recitations which consist of drilling on work already developed should be conduced in a quick decided but pleasant manner and the time fully occupied. Children catch the infection in such cases, provided of course they have not worked already until tired out, if they have no time to be idle they will not lose interest easily.

Reading and writing must be among the first subjects studied as they are necessary in order to make much progress in others and are two of the fundamentals of education. Reading is of value, not only because of the facts learned while at school but also for

the power it gives us to acquire other facts during our whole life. It is almost impossible for a person to be broad minded without knowing how to read, as his knowledge will thereby be necessarily much limited. Writing is secondary to reading but still it is very important for its practical usefulness. Reading is valuable not only for the power it gives us to gain additional knowledge when ever we wish but also for the vocabulary gained. The more widely one reads the greater is the vocabulary he has to use and therefore the greater his power of expression. Reading aloud is valuable for teaching careful enunciation and for training the sense of hearing. Enunciation is even more important than pronunciation because the latter may vary at different times and in different localities. Reading is also valuable for the use of language it teaches. Constant reading of good language goes far towards cultivating the use of it. These are some of the reasons why reading is so important and why it is justly given a prominent place during the whole eight or nine years of elementary work and also why the selections read should be very carefully chosen. Of course, if children are expected to increase their vocabulary by reading, care must be taken to make certain that they fully understand what they read. Writing does not demand the attention that reading does because it is simply a mechanical representation of what we wish to say. When we have learned to form the limited number of

characters used and to join them together to form words we have learned all the principles of writing. Practice makes perfect in this as in all other things but there is no need of setting apart a special time for it after a moderate skill has been acquired. Composition work involvingnot only practice in writing but in the art of expression should receive considerable attention.

The Committee of Fifteen have declared against too much study of formal grammar and have said that if studied too long the beauty of literature is forgotten in noticing its form. Simple language lessons may be taught to children but the intricacies of technical grammar need a more mature mind for their mastery than the average child possesses. A good use of language is acquired more by hearing it used and by familiarity with good literature than by a study of technical grammar. A child who only hears language rightly used and who reads only good literature is not apt to express himself very poorly. The tendency is now towards less grammar and more literature. Comparatively little of the technical grammar will be remembered or will be of any practical use in after life. Some of the best writers and speakers could not pass an examination in formal grammar but none the less they are experts in its use.

It has long been the practice to spend a great deal of time

on arithmetic. Children have been drilled and drilled in each little division of the subject until they have forgotten almost wholly the division preceding. If they learn a new method they are drilled in that method until all others are forgotten. Arithmetic, to be valuable, should be taught in a simple practical way and every operation related to some thing with which the children are familiar. The greater number of the problems can be analyzed in some simple practical way which will take all of the element of difficulty out of them. There is a great deal of what might be termed business arithmetic, although business colleges include a still greater amount under this head, which children in the elementary grades cannot really understand because the transactions involved are too complicated. The Committee of Fifteen say that five years is a sufficient length of time to spend on mere arithmetic and suggest the introduction of algebra in the seventh or eighthgrade. The Committee are not however unanimous on the subjects of arithmetic and algebra. It does not seem as though the whole subject of arithmetic could be finished in five years if that five years is to be confined to the elementary grades especially if the first years, before children have acquired great facility in general reading, be devoted to number work in preparation for the systematic study of arithmetic. It seems as though it might be better to leave the complicated part

of arithmetic as well as the difficult part of the technique of grammar for the High School. Algebra, a simplified form of it, is not only easier than advanced arithmetic but it is more interesting because it does not involve any complicated business operations. To drop arithmetic for a while and take up algebra instead in the latter grades of the grammar school would have the advantage of keeping up the study of mathematics in some form and yet not keeping the children so closely confined to one thing that they would lose all interest in it.

Sciences are now taught to a far greater extent than formerly. The opening wedges have been physiology and hygiene. These are required by law to be taught in many places now. Botany, zoology and other sciences are following in their wake. Familiar science, including the ordinary operations of chemistry and physics, is taught in the lower grades of some schools. Hygiene, under which is embraced the detrimental effects of stimulants and narcotics, as well as the care of the health generally, is very important and cannot be begun too soon. It is of the utmost value that children learn early how to care for their health and to avoid some of the detrimental habits which fasten themselves to so many. It is still a question though with some educators whether the detailed study of physiology is advantageous. Many people object decidedly to having their children study it. To a nervous high

strung child as so many American children are, the systematic study of all of the parts of the body, their condition in health and in disease, is apt to do more harm than good. It is liable to make him fanciful and to lead him to imagine he has diseases which he never had and might never have, but for this. It is even possible to acquire some diseases if one only imagines himself the possessor of them long enough. One teacher who has had a great deal of experience with the natural sciences and who is an enthusiastic advocate of their being taught in all grades makes a decided exception in the case of physiology for the above reasons If physiology, as well as hygiene, must be taught it should be taught so as to give a clear idea of the condition and action of every part studied. The action in breathing may be illustrated by a simple apparatus ma de of a piece of membrane, a bottle with the bottom cut off and a small glass tube. It is comparatively easy to obtain a cats lungs and to show how they act by filling them with air, they are not repulsive in the least but are rather pretty. The action of the muscles and of the tendons can be illustrated by obtaining from some meat market a knee joint with enough of the muscles and tendons left intact to show how they act and by using it so as to show these actions in class.

The objections which apply to the teaching of physiology do not apply to zoology which is the broader andmore comprehensive

study. Rightly taught, zoology is interesting and instructive to children in even the lowest grades, it brings them into touch with the animal world about them, teaches them not to be afraid of worms, insects and suc h things without reason and teaches them to be more careful and observant of all the creatures around them. It is not a personal study and so cannot make them fanciful in the way that physiology can.

Botany, begun orally in the ve ry lowest grades and systematically in the third, is also very valuable in training children to observe the world of nature and it can be made very fascinating. Familiar science, including simple explanations and illustrations of such operations or actions as the rusting of iron and the action of mercury on silver would be intelligible to children of the sixth or seventh grades. One advantage in all this science work is that it brings children so close to nature and teaches them to observe things which otherwise they would never have seen. This habit of observation is not only valuable in broadening their minds but it will be a source of great pleasure to them and occupy much time that might otherwise hang heavy on their hands.

There is a private school for boys in New York City where a rather novel plan is followed in regard to the teaching of sciences. Only one science is taught in the school during any one

year but that science is taught thoroughly and taught in every grade from the lowest to the highest. The next year some other science will be taught in the same manner and the next year, another, until the round has been completed. If a boy takes the full course given at the school he will learn something of all the sciences. This method seems to give good results there, whether it be applicable to all schools or not. The theory of course is that by concentrating the whole attention of the school on one science instead of on several better effects are obtained than would be if all were taught.

History is more fascinating than any mere article of fiction can be, if only it be given the advantages of the form and language employed in fiction and not be made to consist of a mere collection of dates and facts. Fairy stories and fiction of various kinds have their place in developing the imagination but there comes a time when they should yield their supremacy to something more substantial. Good fiction has a legitimate place but to feed the mind upon it entirely is like feeding the body upon sweetmeats alone. History is of value because it gives us an account of the experiences of other individuals and other nations, ennabling us to profit by their mistakes. If a taste could be developed early for history and good literature there would not be so much of a desire to read "dime novels" and stories wherein the hero runs

away from ,home to fight indians ,or something else equally exciting, but wherein he always comes off victorious and never has any of the mishaps which occur in real life. But we cannot accomplish this unless we clothe our heros of real life with some of the forms given to those of fiction. To starve the imagination simply dwarfs one part of our nature but it can be supported on wholesome food instead of being driven to live solely on pernicious sweets and stimulants. Geography is closely allied to history and also to the study of botany, zoology and other natural sciences. It should have its place but, like history, its subject matter should be made real and tangible as far as possible.

One of the best definitions of education is that it is the harmonious development of body and soul. If we wish to define a liberally educated man we may say that he is one who has knowledge and power to use that knowledge but that above all he must have culture. When we attempt to define culture we find that it is hard to give any exact definition of it but that it is something which is gained through the development of our artistic or aesthetic natures, through a knowledge of the world and its customs. Mere study of books will not give it but some knowledge of books is necessary as a foundation for it. In all monarchial countries the schools are graded to a greater or less extent for the class of children that is to attend them. In other words, children must be

educated to a certain extent for the position they are to occupy. Here, where our government is founded on the basis that all are free and equal, although special schools are necessary to fit persons to enter certain avocations yet our elementary schools and if possible our high schools should not only be free to all but their courses of study should be such as to lay the foundation at least for a liberal education. Manual training in schools is advocated by many on the ground of its usefulness, that it will very nearly fit pupils to enter certain trades at once. If it is only going to make it easier for children to step right into their parents footsteps and to follow the same occupation it is wrong according to the basis of our government because we are settling the childs position in life according to his fathers position. Carpenters sons will be carpenters, cabinet makers sons will be cabinet makers, without regard for the fact that they might have been much better lawyers or merchants while others might better have filled their places, provided all had had the same basis upon which to choose that vocation which they liked best and for which they were most fitted and their choice had not in a manner been made for them before they were in a position to choose for themselves. Specialization, to the extent of choosing a life work and in a manner excluding other work should not come until some thing of a general education has been obtained or it is apt to

have been a mistaken choice. It is argued on the other hand that the real purpose and utility of manual training is to quicken the intellect and make the pupil brighter in his other studies. He learns to observe, to be neat , quick, accurate and he exercises a different set of functions with the result that his mind is refreshed and he goes back to his books more interested. This seems the more reasonable view and on this ground manual training is an excellent thing.

If education consists of a harmonious development of body and soul schools, which have to do chiefly with the development of the intellectual part of our natures, should have their courses of study so arranged that all the powers of the mind shall be developed equally. As early as 1875 Rev. Thomas Hill carefully considered this subject and even went so far as to formulate a curriculum of studies beginning with the most elementary work and extending through the college. He divided the field of human knowledge into four elements, space, time, matter and spirit. Of these, space and time are the earliest objects of distinct intellectual action. It is claimed by some that we only know matter through its being the realization of thought in time and space. Be this as it may, we cannot know matter without knowing time and space. Spirit crowns it all. This is Rev. Thomas Hill's basis for his

course of study. Of course he admits that to a certain extent all of these notions are evolved at the same time but still there is an order in which they must be evolved. He says that it was true of the race and that it is true of the individual that these space and time relations are the first objects of distinctly conscious intellection and that from them come the three principal sciences, geometry, arithmetic and algebra. This is the elementary geometry of form which is really taught children in the kindergarten and therefore precedes arithmetic. He does not consider algebra, as some do, an extension of arithmetic but calls it a distinct science These three form one brance of his hierarchy of sciences. Matter is next introduced, as it is suggested by the study of some of the properties in geometry, and forms his natural history branch, including mechanics, chemistry and biology. The study of these material things leads to the study of their history and the uses that have been made of them and so we have the third branch including trades, art, language and law. Now turning the minds attention inward we have psychology, including mental philosophy, aesthetics and ethics. Naturally the next and last step is our relation to the Creator, giving us theology, divided into natural theology and religion. The curriculum was planned so as to introduce into each years work a study in each one of these five depart-

ments of knowledge. What is given under the heads of psychology and theology for the first few years consists simply of incidental training when the opportunity occurs and brief devotional exercises Reading forms the first step in the study of history and the gathering and discussion of insects, the first step in natural history.

In a recent article in the Educational Review W. T. Harris takes up the subject of correlation and gives five coordinate groups of studies which he says are separate groups and under some one of which he says everything can really be classed. His five groups are mathematics and physics, biology (of plants and animals especially), literature and art, grammar and scientific study of language, and history. If this grouping be correct and if it embrace everything in the line of study, then in order to develop all the powers of the mind equally each one of the groups should be represented in the school curriculum for at least part of each year during the elementary and high school courses.

Mr.Harris' classification differs somewhat from the Rev. Hill's in its details but it is following in the latter's footsteps With Mr. Harris, psychology and theology are relegated to a minor place under one of the other groups, history is divided up into history, literature and grammar. Mr. Harris' grouping is much broader and more comprehensive and, as it is practically the same

as the part signed by him in the report of the Committee of Fifteen, it embodies not one man's study, as is the case with the Rev. Hill's, but is really a summary of the work done along that line by the Committee. The Rev. Hill's grouping at the time it was done was quite comprehensive but it is not up to date now. The Committee of Fifteen however have made quite good their claim for the comprehensiveness of their grouping as every study has been carefully considered before the classification was determined. Therefore, if the child has some one study under each group no one power of the mind will be neglected but all will be developed equally. If onthe contrary some one is left out altogether for any length of time some part of themind will lie dormant for the time being. It is better in the elementary years if each group be represented all the time because children tire easily if confined to one thing long at one time and so need as great a variety as possible. The novelty does not wear off so easily when the attention has a number of objects upon which to concentrate itself. Besides this variety gives a broader field and a better foundation for the specialization which must come later.

It is claimed by many that no specialization should be allowed until the high school at least is passed. Others claim that even in the lowest grades some specialization should be permitted. The

former say that no one is ready to specialize until he has a fair general education. The latter claim, on the contrary, that the greatest development of the mind takes place along the lines in which it is most interested and that to compel the child to study things which are distasteful and to give him no chance to learn the things in which he is most interested will to a certain extent dwarf his mind by not giving it sufficient nourishment of the kind that it needs. This may result in the fact that by the time he is permitted to specialize all his interest will be spent and he will have no more desire for one thing than for another, will not be able to choose any occupation but will be tossed wherever chance may decide. Others claim that whatever study is disliked most, that is the thing to master because of the control gained over the mind. This latter argument is true to a certain extent but it will hardly do to apply it too closely to children as their minds are not fitted for long close concentration on disagreeable tasks, not that all things disagreeable should be eliminated from their lives but when they come in the guise of study they should be interspersed with the pleasant, at least until the habit of study has become a fixed one and children are able to appreciate the value of many of these disagreeable tasks. It would seem in view of all of these arguments, apparently founded on the soundest of

principles, as if some compromise might be effected and the best of each method adopted into the school system. Give all the children the same general course of study but some time during the days session give each child a little time to devote to whatever branch he likes best. If he likes best to read, let him read, or if manual training takes his fancy, let him try that. In this way he would get his general education on which to specialize later and his mind would not have a chance to fail to progress as fast as it is able for lack of the special stimulus it may need.

Aesthetics and ethics enter so largely into the best development of a person that although it is not wise to teach them directly yet no opportunity should be neglected to cultivate them indirectly. They would soon become distasteful if taught as regular lessons but a love of the beautiful and a desire for what is right may be inculcated by example and by making the school room as bright and pretty as the means at hand will allow. A pretty plant growing, a bright tasteful picture tend to induce a liking for pretty things. Moreover such things tend to make people better, especially children who are very impressionable. Music and drawing have much to do with culture and refinement. Drawing has the additional advantage of training the eye to observe form. Both are now taught largely in public schools. Physical exercises

of some kind are excellent not only because many children need them for the sake of their health but because a little regular drill of this kind goes far towards giving people a certain grace and ease of carriage which is very useful in after life. An awkward person is always at a disadvantage.

The sense of sight and the sense of hearing need a little special attention, not in the way of regular lessons but incidentally. By far the larger part of our vocabulary comes to us through the senses, the part which we gain through self consciousness, intuitions or innate knowledge being very small in comparison Of the senses, we learn most through the sense of sight, therefore this sense deserves some special attention. We cannot see better by special training but we learn to see things which otherwise we would never have noticed. Science work and training a child to be quick and accurate in all that he does are especially valuable in training this sense. Next to sight the most important sense is that of hearing. It may almost be said that the amount of culture a person has is proportional to the delicacy of his sense of hearing. Training pupils to enunciate clearly is very valuable in this line because one who is always careful himself will catch more quickly and interpret more correctly the sounds that he hears.

Above all we should remember that the most important thing

is to teach children how to study, to put them in the way of acquiring knowledge for themselves. Only a small proportion of the facts which they learn in school will be directly useful to them in after life but the power to acquire more of these facts will be of immense value. Some studies abound largely in useful information but others are valuable only for their mental drill. Mere knowledge without the power to use or apply it in any way does not stamp a person as beingliberally educated and a mere memorizing of a mass of facts to be forgotten in a short time will not make useful and intelligent citizens. Children learn quickly and easily that in which they are interested but this interest is destroyed if they are drilled to deathin it. It is wonderful how much they will learn of any subject if given only a little time for it every day. Encourage them to talk and to give their opinions, even if they are worthless, because this is one great means of interesting them and making them feel that it is worth while for even them to try and do their best.